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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/567,780	02/09/2006	Hiroyuki Akita	Q92662	3049
23373	7590	11/28/2006	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			NGUYEN, HANH N	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/567,780

**Applicant(s)**

AKITA ET AL.

**Examiner**

Nguyen N. Hanh

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 12, 15, 16, 18, 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Asao.

Regarding claim 12, Asao discloses a dynamoelectric machine comprising: a case (300, 400 in Fig. 1) having a suction aperture (300a, 400a in Fig. 1) for sucking in air and a discharge aperture (300a, 400a in Fig. 1) for discharging said air; a rotor (100 in Figs. 1 and 2) including: a rotor coil (120b) disposed so as to be fixed to a shaft inside said case, said rotor coil generating magnetic flux on passage of electric current; and a Lundell pole core (120) disposed so as to cover said rotor coil, said pole core having a plurality of claw-shaped magnetic poles that are magnetized by said magnetic flux; a stator including: a stator core (210) disposed so as to surround said rotor; and a stator coil (220) formed by winding a conducting wire into slots extending axially on said stator core; a fan (114) rotating together with said rotor, said fan directing said air from said suction aperture into said case, blowing said air centrifugally, and discharging said air externally through said discharge aperture (Fig. 1), said pole core being constituted by a first pole core body and a second pole core body in which said claw-shaped magnetic poles intermesh with each other alternately, wherein: said fan has a blade

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(114 in Fig. 1 and 2) including an interposed portion (114b in Figs. 1 and 2) extending axially from an end surface of said pole core between an adjacent pair of said claw-shaped magnetic poles.

Regarding claim 15, Asao discloses a dynamoelectric machine wherein: said interposed portion of said blade projects toward one of said claw-shaped magnetic poles in said adjacent pair of claw-shaped magnetic poles (Figs. 1 and 2).

Regarding claim 16, Asao discloses a dynamoelectric machine wherein: said interposed portion of said blade is bent at a bent portion so as to have an angular shape when viewed radially (Figs. 1 and 2).

Regarding claim 18, Asao discloses a dynamoelectric machine wherein: said fan is formed by bending a flat plate (the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight).

Regarding claim 21, Asao discloses a dynamoelectric machine wherein: blades of said fan are disposed at a nonuniform pitch circumferentially; and a blade disposed between an adjacent pair of said claw-shaped magnetic poles has said interposed portion (Fig. 2).

Regarding claim 22, Asao discloses a dynamoelectric machine wherein said fan is fixed only to an end surface of said pole core near a rectifier for converting alternating current generated in said stator into direct current.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 13, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asao in view of Umeda et al.

Regarding claim 13, Asao shows all limitations of the claimed invention except showing the dynamoelectric machine wherein: said stator coil is wound into a distributed winding in which said conducting wire is disposed in a orderly manner inside said slots at intervals of a predetermined number of slots.

However, Umeda et al. disclose the dynamoelectric machine wherein: said stator coil (33 in Fig. 2) is wound into a distributed winding in which said conducting wire is disposed in a orderly manner inside said slots at intervals of a predetermined number of slots for the purpose of preventing heat problem of the alternator (Col. 1, lines 64-67).

Since Asao and Umeda et al. are in the same field of endeavor, the purpose disclosed by Umeda et al. would have been recognized in the pertinent art of Asao.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Asao by winding the coil into a distributed winding in which said conducting wire is disposed in a orderly manner inside said slots at intervals of a predetermined number of slots as taught by Umeda et al. for the purpose of preventing heat problem of the alternator.

Regarding claim 14, Umeda et al. disclose a dynamoelectric machine wherein a coil end is formed in said stator coil by folding said conducting wire over outside an end surface of said stator core (Fig. 3); and a space is formed in said coil end above said end surface by said conducting wire having straight portions projecting axially outward from said end surface (Fig. 2).

Regarding claim 17, Asao discloses a dynamoelectric machine wherein said interposed portion of said blade (114b in Fig. 2) is bent at a bent portion so as to have an angular shape when viewed radially; and said bent portion is disposed radially opposite said space (Fig. 1).

3. Claims 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asao in view of Hayashi et al.

Regarding claim 19, Asao shows the dynamoelectric machine wherein a distance between said interposed portion and said adjacent pair of claw-shaped magnetic poles is greater than a distance between an inner peripheral surface of said stator core and an outer peripheral surface of said rotor (Fig. 1). Asao fails to show the fan is made of iron.

However, Hayashi et al. disclose the dynamoelectric machine wherein the fan is made of iron (Col. 3, lines 45-48) for the purpose of reducing noise of the alternator (Col. 1, lines 45-50).

Since Asao and Hayashi et al. are in the same field of endeavor, the purpose disclosed by Hayashi et al. would have been recognized in the pertinent art of Asao.

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It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Asao by using iron to form the fan as taught by Hayashi et al. for the purpose of reducing noise of the alternator.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asao in view of Nagate et al.

Regarding claim 13, Asao shows all limitations of the claimed invention except showing the dynamoelectric machine wherein fan is constituted by a nonmagnetic material.

However, Nagate et al. disclose the dynamoelectric machine wherein fan (39 in Fig. 36) is constituted by a nonmagnetic material (Col. 23, line 15) for the purpose of preventing effect of flux leakage from the rotor (Col. 23, lines 16-17).

Since Asao and Nagate et al. are in the same field of endeavor, the purpose disclosed by Nagate et al. would have been recognized in the pertinent art of Asao.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Asao by using non-magnetic material to form the fan as taught by Nagate et al. for the purpose of preventing effect of flux leakage from the rotor.

### **Conclusion**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (571) 272-2031. The examiner can normally be reached on Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg, can be reached on (571) 272-2044. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HNN

November 25, 2006

  
DARREN SCHUBERG  
SUPERVISOR  
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